UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,953	03/30/2004	Kenji Kita	0087/008001	3108

22893	7590	10/10/2006

SMITH PATENT OFFICE
1901 PENNSYLVANIA AVENUE N W
SUITE 901
WASHINGTON, DC 20006

EXAMINER
PANNALA, SATHYANARAYA R

ART UNIT	PAPER NUMBER
2164	

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE **3** MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 March 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☒ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *3/30/2004*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   Application No. 10/811953 filed on 3/30/2004 has been examined. In this Office

Action, claims 1-18 are pending.

Priority

2.   Acknowledgment is made of applicant's claim for foreign priority based on an

application filed in Japan on 6/18/2003. It is noted, however, that applicant has not filed

a certified copy of the 2003-174078 application as required by 35 U.S.C. 119(b).

Information Disclosure Statement

3.   The information disclosure statement (IDS) submitted on 3/30/2004 is in

compliance with the provisions of 37 CFR 1.97 and has been considered by the

examiner.

Drawings

4.   Figure 1 should be designated by a legend such as --Prior Art-- because only

that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in

compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

abandonment of the application. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct

any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

Specification

5.   The title of the invention is objected, because it is not descriptive to the current

invention. A new title is required that is clearly indicative of the invention to which the

claims are directed.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
>
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
>
> the prior art are such that the subject matter as a whole would have been obvious at the time the
>
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
>
> Patentability shall not be negatived by the manner in which the invention was made.
>
> This application currently names joint inventors. In considering patentability of the claims under 35
>
> U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly
>
> owned at the time any inventions covered therein were made absent any evidence to the contrary.
>
> Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates
>
> of each claim that was not commonly owned at the time a later invention was made in order for the
>
> examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior
>
> art under 35 U.S.C. 103(a).

7.   Claims 1-4, 6-10 and 12-18 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Kobayashi et al (USPA Pub. 2003/0217071 A1) hereinafter

Kobayashi, and in view of Zhu (US Patent 6,611,609) hereinafter Zhu.

8.   As per independent claims 1, 7, 13 and 17, Kobayashi teaches a data

processing system capable of accessing data of a plurality of different kinds and

processing data in accordance with the characteristics specific to each data kind

(Page 3, paragraph [0043]). Kobayashi teaches the claimed, providing a plurality of

vectors having feature values in the multidimensional data (page 3, paragraph [0026]).

Kobayashi teaches the claimed, transforming a specified retrieving condition into a

retrieving query vector having a dimension equal to a dimension of the multidimensional

data (Fig. 42, page 19, paragraph [0475]). Kobayashi does not teach calculating the

distances. However, Zhu teaches the claimed, calculating distances between the

retrieving query vector and potential vectors to be retrieved said step of calculating

distances includes calculating a distance between the retrieving query vector and a

potential vector to be retrieved by serially adding a value corresponding to a subsequent

component of each vector for a subsequent dimension to a cumulative value when the

cumulative value is less than the maximum value (col. 3, lines 36-43). Zhu teaches the

claimed, stopping said step of serially adding a value and skipping said step of

calculating a distance when the cumulative value is greater than the maximum value

(col. 3, lines 36-43). Zhu teaches the claimed, retaining the distance calculated in said

step of calculating when the cumulative value is less than the maximum value(col. 9,

lines 47-55). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Zhu's teachings would have allowed Kobayashi's method of characterizing multi-dimensional data structures, so that they can be easily indexed, stored and retrieved, which method reduces computational requirements as much as possible (col. 5, lines 15-19). Kobayashi teaches the claimed, replacing the maximum value with the distance calculated in said step of calculating, when the distance is less than the maximum value (page 14, lines [0370]). Kobayashi teaches the claimed, outputting the multidimensional data retained in said step of retaining the distance after said steps of retaining and replacing (page 9, paragraph [0229]).

9. As per dependent claims 2, 8, 14, Zhu teaches the claimed, sorting components of the potential vectors to be retrieved based on variance values of the components of the potential vectors to be retrieved for respective dimensions before said step of calculating a distance, wherein said step of calculating a distance starts by adding a component of the dimension having a greater variance value (col. 23, lines 49-58). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Zhu's teachings would have allowed Kobayashi's method of characterizing multi-dimensional data structures, so that they can be easily indexed, stored and retrieved, which method reduces computational requirements as much as possible (col. 5, lines 15-19).

10.   As per dependent claim 3, 9,15, Zhu teaches the claimed, transforming a

coordinate system of a vector before said step of calculating a distance, wherein said

step of calculating a distance uses the vector obtained in said step of transforming

(col. 3, lines 29-32). Thus, it would have been obvious to one of ordinary skill in the

data processing art at the time of the invention, to have combined the teachings of the

cited references because Zhu's teachings would have allowed Kobayashi's method of

characterizing multi-dimensional data structures, so that they can be easily indexed,

stored and retrieved, which method reduces computational requirements as much as

possible (col. 5, lines 15-19).

4. As per dependent claim 4, 10, Kobayashi teaches the claimed, step of providing a

plurality of vectors includes storing the plurality of vectors in at least one of a local

database and a database connected to a network and said steps of calculating and

retaining use the data in at least one of the local database and a database connected to

the network (Fig. 1, page 9, paragraph [0225]).

11.   As per dependent claims 6, 12, Kobayashi does not explicitly teach image

pattern recognition. However, Zhu teaches, recognizing an image pattern (col. 17, lines

5-11). Thus, it would have been obvious to one of ordinary skill in the data processing

art at the time of the invention, to have combined the teachings of the cited references

because Zhu's teachings would have allowed Kobayashi's method of characterizing

multi-dimensional data structures, so that they can be easily indexed, stored and

retrieved, which method reduces computational requirements as much as possible
(col. 5, lines 15-19).

12.   As per dependent claim 16, Kobayashi teaches the claimed, a medium readable
by a machine (page 19, paragraph [0423]).

13.   As per dependent claim 18, Kobayashi teaches the claimed, retaining the
distance includes means for retaining the distance when the distance is within a
predetermined range (page 4, paragraph [0055]).

14.   Claims 5, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Kobayashi et al (USPA Pub. 2003/0217071 A1) hereinafter Kobayashi, in view of Zhu
(US Patent 6,611,609) hereinafter Zhu and in view of Castelli et al (US Patent
6,134,541) hereinafter Castelli.

15.   As per dependent claim 5, 11, Kobayashi and Zhu do not explicitly teach music
data. However, Castelli teaches the claimed, the data includes at least one of
document data, voice data, music data and image data which includes at least one of a
still image and a video image (Fig. 1, col. 7, lines 25-28). Thus, it would have been
obvious to one of ordinary skill in the data processing art at the time of the invention, to
have combined the teachings of the cited references because Zhu's teachings would
have allowed Kobayashi's method of characterizing multi-dimensional data structures,

so that they can be easily indexed, stored and retrieved, which method will generate

efficient indexes from the viewpoints of memory utilization and search speed (col. 5,

lines 33-34).

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Sathyanarayan Pannala whose telephone number is

(571) 272-4115. The examiner can normally be reached on 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.
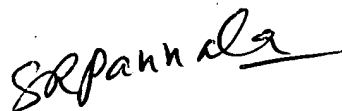
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assistance from a USPTO Customer Service Representative or access to the

automated information system, call 800-786-9199 (IN USA OR CANADA) or

571-272-1000.

Sathyanarayan Pannala
Examiner

srp
October 1, 2006